WHAT IS CLAIMED IS:

1   1.   A method for transmitting data in a bitstream having a plurality of frame

2   portions, the bitstream obeying a protocol that permits the transmission of private data in

3   a private data portion, the method comprising:

4   receiving data from a data source;

5   determining syntax information for the data;

6   encoding the data and the syntax information into an encoded bitstream,

7   the syntax information being included in the private data portion of the encoded

8   bitstream; and

9   transmitting the encoded bitstream.

1   2.   The method according to claim 1, wherein the syntax information permits

2   a decoder to identify a bit at which decoding should begin.

1   3.   The method according to claim 2, wherein each frame portion includes at

2   least one private data portion.

1   4.   The method according to claim 1, wherein the syntax information permits

2   a decoder to determine if any bits in the frame portion contain errors.

1   5.   The method according to claim 1, wherein the syntax information permits

2   a decoder to determine if any of the bits in the bitstream contain errors.

1   6.   The method according to claim 1, wherein the syntax information permits

2   a decoder to determine if any of the bits of at least one sub-portion of the frame portion

3   contains errors.

1   7.   The method according to claim 1, wherein each of the frame portions

2   further includes at least one or more sub-portions, the sub-portions can vary in number

3   and size between different frame portions.

1   8.   The method according to claim 7, wherein the syntax information includes

2   at least length information of each of the sub-portions of each frame portion.

1   9.   The method according to claim 8, wherein a decoder can use the length

2   information to skip sub-portions of the frame portion that are determined to contain

3   errors.

10.   The method according to claim 1, wherein the frame portion further includes a plurality of elements, each element including an element ID that identifies a type of element in the bitstream.

11.   The method according to claim 10, wherein the plurality of elements include at least a data stream element having a data stream ID.

12.   The method according to claim 11, wherein the data stream element further includes a tag that identifies the type of data contained in a data portion of the data stream element.

13.   The method according to claim 12, wherein when the tag corresponds to a transport identifier, wherein the data stream element includes protocol information in the data portion of the data stream element.

14.   An apparatus that transmits data in a bitstream having a plurality of frame portions, the bitstream obeying a protocol that permits the transmission of private data in a private data portion, the apparatus comprising:

a transmitter that receives data from a data source, determines syntax information for the data, encodes the data and the syntax information into an encoded bitstream, the syntax information being included in the private data portion of the encoded bitstream, and transmits the encoded bitstream.

15.   The apparatus according to claim 14, wherein the syntax information permits a decoder to identify a bit at which decoding should begin.

16.   The apparatus according to claim 15, wherein each frame portion includes at least one private data portion.

17.   The apparatus according to claim 14, wherein the syntax information permits a decoder to determine if any bits in the frame portion contain errors.

18.   The apparatus according to claim 14, wherein the syntax information permits a decoder to determine if any of the bits in the bitstream contain errors.

19.   The apparatus according to claim 14, wherein the syntax information permits a decoder to determine if any of the bits of at least one sub-portion of the frame portion contains errors.

20.   The apparatus according to claim 14, wherein each of the frame portions further includes at least one or more sub-portions, the sub-portions can vary in number and size between different frame portions.

21.   The apparatus according to claim 20, wherein the syntax information includes at least length information of each of the sub-portions of each frame portion.

22.   The apparatus according to claim 21, wherein a decoder can use the length information to skip sub-portions of the frame portion that are determined to contain errors.

23.   The apparatus according to claim 14, wherein the frame portion further includes a plurality of elements, each element including an element ID that identifies a type of element in the bitstream.

24.   The apparatus according to claim 23, wherein the plurality of elements include at least a data stream element having a data stream ID.

25.   The apparatus according to claim 24, wherein the data stream element further includes a tag that identifies the type of data contained in a data portion of the data stream element.

26.   The apparatus according to claim 25, wherein when the tag corresponds to a transport identifier, wherein the data stream element includes protocol information in the data portion of the data stream element.